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Diagnostic pro-innovation methodology for socio-environmental responsible organizations

Iluska Lobo Braga[1], Flávio de São Pedro Filho[2], Jeoval Batista da Silva[3], Irene Yoko Taguchi Sakuno[4], Janilene Vasconcelos de Melo[5]

[1]Ph.D. Candidate at the Program Post-graduation in Administration-UNIGRANRIO. Member of the GEITEC – Research Group on Management of Innovation and Technology, Brazil. E-mail: iluskalobo@gmail.com

[2]Post-Doctor in Management and Economics by the University of Beira Interior (UBI), Portugal. Doctor in Administration by the University of São Paulo, Brazil. Doctor in Management of Enterprise by the Universidad Autónoma de Asunción, Paraguay. Professor and Researcher at the Program Post-graduation in Administration of the Federal University of Rondônia (UNIR) where is Coordinator at the GEITEC – Research Group on Management of Innovation and Technology / UNIR / CNPq, Brazil. E-mail: flavio1954@gmail.com

[3]Ph.D. Candidate in Law at the Program Post-graduation in Law at the DINTER UNIFOR/CIESA. Is Member of the GEITEC – Research Group on Management of Innovation and Technology, Brazil. E-mail: jeovalbs@gmail.com

[4]Professor at the Federal University of Rondônia, Campus Ji-Paraná. Is Ph.D. Candidate in Public Policy by the Faculty of Rondônia / UFRGS.Member at the GEITEC – Research Group on Management of Innovation and Technology, Brazil. E-mail: ireneskn@hotmail.com

[5]Doctor in Administration by the UFRGS, Brazil.Professor at the Federal University of Rondônia.Docent of Environmental Accounting. E-mail: janilene18@gmail.com

Abstract— *Organizational managers seek to align their strategies in order to keep their business in the competitive environment. This qualitative research is based on the Theory of Planned Behavior, the concepts of innovation and other related required. The expectation of this task is to interpret the client's perception as a driver for the innovation required in the operating system of supermarkets in the city of Porto Velho, capital of Rondonia State, Brazil. It has as main objective to develop a valid methodology to the monitoring of change required in the face of the behavior of the consumer. For this, specific objectives are required: Identify the elements of innovation that promote changes in the behavior of the consumer (1), describe the innovations perceived by the consumers in organizations socially and environmentally responsible (2), and develop a methodology to diagnose the organizational innovation (3). It was adopted the Case Study Method, with bibliographic research, focus groups, questionnaires, data tabulation, analysis and critique of the content and preparation of the results obtained. As an additional instrument was used the Table Likert in the measurement of five options, in order to understand the satisfaction of the respondent. The research shows that supermarkets satisfy the purchase item, but that the organization needs to focus on four elements to improve their performance; when considering these elements forward the strategic functional activities, it is possible to identify the challenges of innovation focused on the excellence of the organization's operating system; the methodology proposes the performing of diagnostic processes that drive the innovation processes for an efficient and effective strategic performance in organizations dedicated to the customer. It is expected to recognize the consumer's perception and, based on this parameters, guide the processes of innovation strategically. This study is a contribution to organizations seeking competitive advantage through continuous innovation focused on the customer.*

Keywords— Amazon. Innovation. Environmental Management. Methodology. Sustainability.

I. INTRODUCTION

The strategic management practices in organizations require responsible relationships in the dynamics of cultural, social and also environmental changes. The performance in a complex and globalized market in which competitors innovate themselves through significant dynamics, requires the perception of the managers on these changes to position themselves in front of customers eager for innovation of the goods and services of their interest . So the innovation is the competitive advantage because it brings the differential that improves the results for the organization and the consumer.

In this context, it is necessary to insert continuously practices of innovation that are strategically set in the competitive environment where the organizations participate. It is questioned what the consumers, at the time of purchase of goods and services, consider to choose the organization. As well as the cultural, social and environmental aspects of an environmental

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organization perceived by these consumers to influence their purchase intention at the time of decision. It is possible to structure innovations in line innovations with stakeholders.

II. OBJETCTIVES

This study aims to present a methodology in which the organization can align its strategy, in an innovative and continuous manner, generating a competitive advantage to be perceived by its customers, consumers and the society in general. Where the tool that leverages the search for innovation is the customer perception and the guiding questions are correlated with the functional activities of the companies. This way, stablish the difference in their organizational skills in the competitive landscape. This study is pioneer front the lack of methodology that points scenarios capable of innovation as drivers of strategies.

Therefore, this study has as general purpose the elaboration of a valid methodology for monitoring the required change in the face of the consumer behavior; and to reach this objective, the following specific objectives are necessary: identify the elements of innovation that promote change in the behavior of the consumer (1), describe the innovations perceived by consumers in the organizations socially and environmentally responsible (2), develop a methodology for organizational innovation in the face of the changes required (3).

III. THEORETICAL FRAMEWORK

Organizations are increasingly focused on people management able to develop strategies which ensure its legitimacy in society. The social dynamics follows the evolution of its concepts and trends and in the universe where they exercise the high performance, seeking to innovate in order to keep themselves competitive. To understand this changing landscape, it will be used the Planned Behavior Theory as the basis for the preparation of organizational pro-innovation idealizers; The expectation here is to generate behavioral inductors of the consumer of goods and services offered by organizations socially and environmentally responsible; as response there will be an operational action toward the excellence to be offered in the market. In addition, concepts of innovation are introduced to the sustainability, and its inference in the processes, in the functional strategies, and typology; it also sets concepts about the consumer perception in order to allow the measurement of trends.

3.1 Planned Behavior Theory

The research of Martins, Serralvo,and John (2014) indicates that the Theory of Reasoned Action (TRA) was developed by Martin Fishbein through the collaboration of Icek Ajzen and other scholars of the behavioral implications resulting from the information about a causal relation. This theory was modified and expanded through proposals supported by influential motivational focuses of personal attitudes, whose central element is the intention to perform an action; it is sustained by the belief of behavioral, normative or control nature. The Theory presents a clear definition and a solid attitudinal concept; it shows a direct relationship between the behavioral intentions and attitude of the subject in an independent way of his evaluation, regarding to the specific act practiced by him.

3.2 Innovation and the Functional Strategy

Literary appropriation in Jones and George (2007) points out that the process of decision of the administrator to a model of efficiency and high performance must be linked to a structured planning process, covered by a strategic design in order to lead the organization to its excellence, which may guide its employees for successful results in general, and in particular in the complexity of the methods involving innovation, and business processes. At the functional level, this strategy allows the effectiveness and efficiency in functional tasks, following the ideal of the researchers cited that portray five levels, namely, Manufacturing (1) Marketing (2); Service (3); Information System (4) Materials Management (5) and the respective expected results. The table 1 below describes the functionality of these levels in the organization, as well as the expected result regarding to the efficiency of this component.

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Table.1: Responsibility of the operating system and expected result.

Functional Activities	Responsibility of the activity	Expected result of activity
1. Production function	1.1 Create the good or the service related to physical or manufactured products (a); service offered to the customer (b).	1.1.1 Decreases the cost if done efficiently. 1.1.2. Expands the quality with differentiation when consistent
2. Marketing function	2.1 Position the brand and optimize the advertising (a); favor the preference in the customer perception (b).	2.1.1 Increases the perception of the value. 2.1.2 Creates impressions related to the brand.

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Functional Activities	Responsibility of the activity	Expected result of activity
3. Service function	3.1 Provides service and aftermarket support.	3.1.1 Creates value impression in the minds of the customers. 3.1.2 Makes closer the relationship between the company and consumer.
4. Material management function	4.1 Controls the movement of physical materials through the value chain; since the acquisition to production and distribution.	4.1.1 Lowers the costs regarding to the efficiency of the management of materials. 4.1.2 Enriches the product offered.
5. Information System function	5.1 Controls the electronic systems. 5.2 When added to the internet communication tools, they are able to alter the efficiency and the effectiveness.	5.1.1 Increases the efficiency when it involves the functional strategies. 5.1.2 Establishes effectiveness of all strategies of the operating system.

Source: Adapted from Jones and George (2008; 2012).

By discussing the functions of the Operational System, Jones and George (2008; 2012) highlight the Marketing. This function plays an important role in the value chain, allowing a definition of the company´s business in terms of the customer necessities that are being met. Joining yet the prospect of Garcia et al. (2008), by clarifying the meaning of the measurement and disclosure of environmental initiatives undertaken by organizations; since correct, consistent and transparent, reflecting positively on the strengths of the company; this perspective becomes a tool that influences the consumer behavior. The result is the new organizational setup of the project

3.3 Innovation Concepts in face of the consumer´s perception

The organizations that are positioned in the market as innovative, necessarily has a culture of business innovation, establishing a continuous improvement of the processes, technologies and products. This improvement can be based on the customer behavior that, according to the studies done by Garcia et al. (2008) suggest seven elements for the decision making by the consumers. On table 2 the elements are described and linked to the behaviors presented and systematized by scholars.

These elements of decision of the consumer may be a guideline in developing a strategic diagnosis. For this, it was considered the use of the Theory of Planned Behavior, once it states that the attitude of the person can be influenced by her intention of acting. Therefore, in the face of the possibility of generating a continuous innovation, the perception of the consumer expresses in the steps of decision shown above may develop idealizers in an organizational pro-innovation diagnosis.

IV. METHODOLOGY

Ventura (2007) classifies the case studies according to the purpose of the investigation; thus they can be private, instrumental, collective or naturalistic. The naturalistic case study prioritizes the qualitative approach and it has three basic procedures: The exploratory procedure, which comprises the time to locate the data sources necessary for the study (a) the delimitation procedure of the study, i.e., the determination of the research focus and the establishment of the procedures for gathering information, using research on focus group (b) and the procedure of systematic analysis and report elaboration with an theoretical and practical analysis , starting from the exploratory phase (c). According to those steps, this study was performed, as it is shown on Figure 1.

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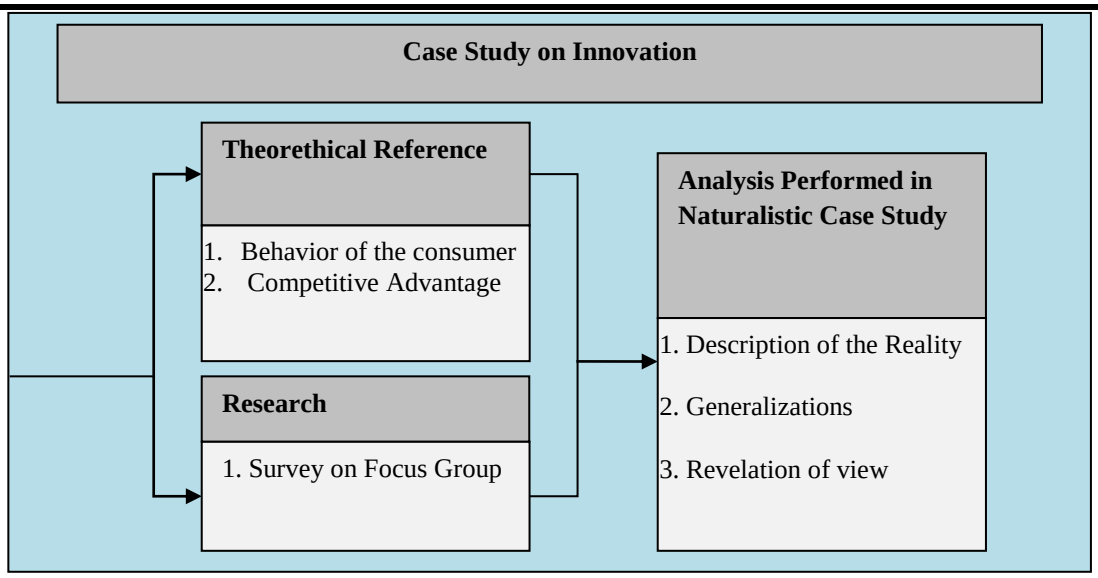

Fig.1: Diagram of the case study Method.

Source: Prepared by the author.

The next step was the coding of primary data. For this, a focus group in order to give testable subsidies was provided. For the accomplishment of this task it was established as a focus group, some residents in Porto Velho potential consumers of the supermarket services in this municipality, randomly consulted and that agreed to contribute to this task by answering a questionnaire.

It was considered the possibility to measure the trends of the respondents of the Focus Group, in order to evaluate subsidies in diagnostic pro-innovation in the grocery business branch. The questionnaire applied to the respondents contains structured responses, according to the Likert Scale in five options. It was acknowledged the assumption that the process of innovation can be stimulated by the entrepreneur, from the performance perceived by the customer; the more he perceives the company, the more will grow his Competitive Differential. However the negative assessments may impose significant improvements in organization, now through a requested innovation.

A study in Rea (2000) makes clear that no questionnaire is ideal to obtain all the information needed in a research and that its complex multidisciplinary requires professionalism at the moment of the questionnaire elaboration. It must be clear, comprehensive and acceptable, as well as to consider the size of the sample. Therefore, in the preparation of the questionnaire applied, in other words, based on the results expected by functional operating system of the organizations according to studies in Jones and George (2008; 2012), it was drawn up questions and they were correlated to the decision-making elements of consumer in accordance with the study done by Garcia et al. (2008). The questions proposed firstly were tested before of its application with a group of researchers and adjusted front to the theoretical concepts mentioned above. The table 2 presents the result of the questions used in the research and its respective correlation with theoretical elements also described above.

Table.2: Correlation of the issues surveyed with the Functional level and Elements

Functional Level of the Organization	Questions applied to the consumers	Elements of the consumer decision
1. Production function	1.1 The company offers new products of its own creation and / or new brands.	1.1.1. Search for information;
2. Marketing function	2.1 The company supports social projects	2.1.1. Recognition of the necessity;
3. Marketing function	3.1 The company supports environmental projects	3.1.1. Search for information;
4. Production function	4.1 The company maintains an adequate communication channel with the customers (news, products, promotions, offers)	4.1.1. Recognition of the necessity;
5. Marketing function	5.1 The company offers typical products of the Amazon (alligator meat, fruits, almonds, etc.)	5.1.1. Evaluation of the alternatives or pre-purchase;

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Functional Level of the Organization	Questions applied to the consumers	Elements of the consumer decision
6. Information System function	6.1 The customer finds the prices of product easily.	6.1.1Purchase;
7. Material management function	7.1 The company staff is helpful and courteous in service.	7.1.1. Consumption;
8. Material management function	8.1 The company exposes the products on the shelf in order to facilitate the comparison of products.	8.1.1. Consumption
9. Service function	9.1 The company provides opportunity to exchange the products purchased.	9.1.1. Post-consumption evaluation
10. Service function	10.1 The company assists in the disposal of products through own selective collection (batteries, packaging, etc.)	10.1.1.Disposal

Source: Prepared by the author.

V. RESULTS AND CONCLUSION

40 consumers were consulted. From these, 73% have responded to the questionnaire. Regarding to the gender 34% were women and 66% men, 55% of whom reported having a gain greater than $ 1,800 (US dollar). The percentage of the responses which organizes the performance regarding to the perception of the respondents, a fact that allows to introduce the proposed results for the specific objectives outlined in this study.

5.1 Identification of the innovation elements that promote changes in the behavior of the consumers

Studies in Garcia et al. (2008) suggest seven elements considered in this task: The recognition of the necessity through the questions 2 and 4; Information seeking, through the questions 1 and 3; and the consumption through the questions 7 and 8. The pre-purchase, purchase, post-consumer and disposal elements were observed respectively in questions 5, 6, 9 and 10.

Consider the Recognition of Necessity phase. It expresses the consumer perception about the determinant of consolidation of the possibility of purchase. The fact is an indicative for business innovation, according to a study of the typology of innovation. It was noticed that the supermarkets provide unsatisfactory services, shown on Figure 2.

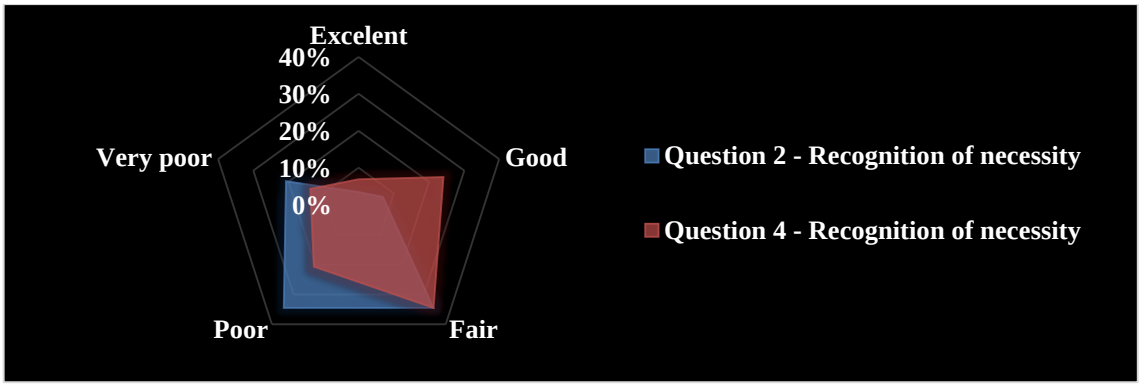

Fig.2: Elements Recognition of Necessity

Source: Prepared by the author. Based on the data provided by the Focus Group.

5.2 Description of the innovations noticed by the consumers in the company surveyed

It was considered as descriptors the operating system of the organizations that, according to Jones and George (2008; 2012) is the combination of different functional activities in order to acquire inputs and convert them into products. The functional activities presented by the authors are: Production Function (1); Marketing Function (2); Service Function (3); Materiel Management Function (4); and Information System Function (5). At this stage of the study we will do transversal analysis between the functional activities and the elements of perception in order to diagnose the location in the operating system that should receive a stimulus to be innovated.The questions prepared for the marketing function were developed to show the environmental image of the companies surveyed

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considering this image as a competitive differentiator treated by Garcia et al. (2008). The responses suggest a low socio-environmental responsibility; more than 55% of respondents perceive it as average or bad, shown in Figure 3.

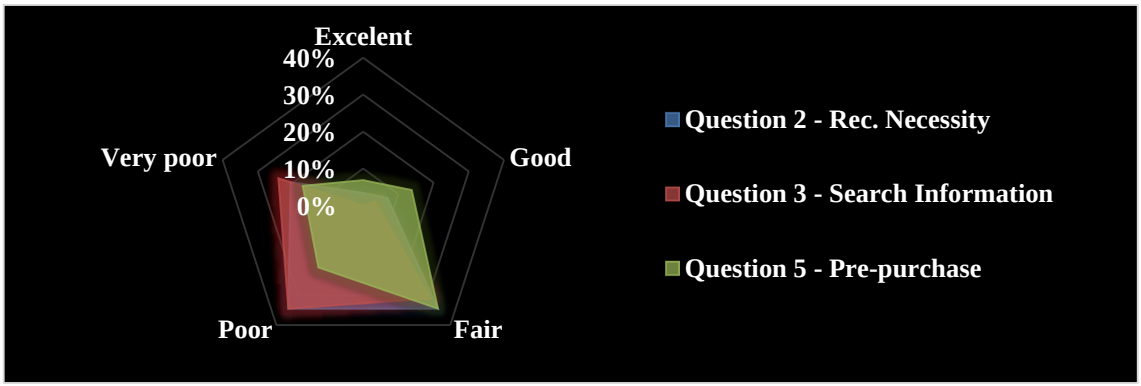

Fig.3: Marketing function – Socio-environmental Image.
Source: Prepared by the author. Based on the data provided by the Focus group

In this research, the production Function assessed in Questions 1 and 4, reaches 83% and 79% respectively in the sum of the responses "good", "fair" and "poor" . This may mean that the consumers are undecided or that the service tends to dissatisfaction. The theoretical basis of the Competitive Advantage presents the factors of efficiency and quality added to an rapid customer response. Soon, this functional activity may be the main focus of innovation to be worked by the organization, show on Figure 4.

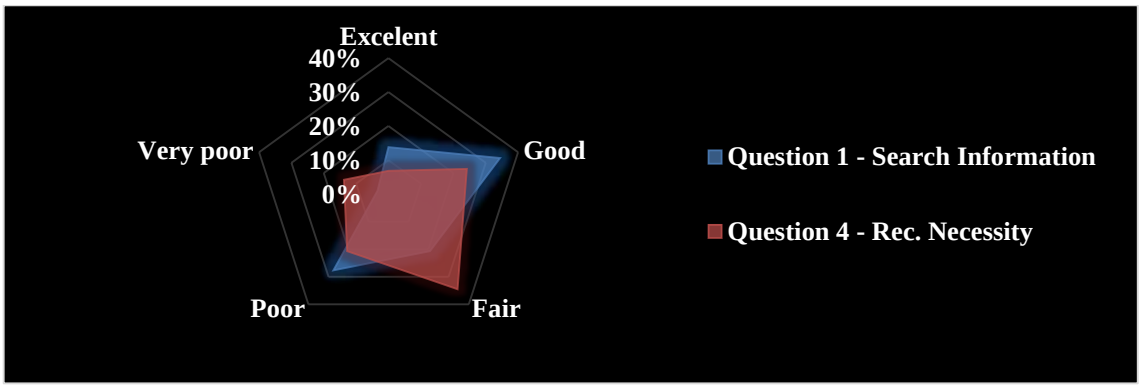

Fig.4: Production Function
Source: Prepared by the author. Based on the data provided by the Focus group.

5.3 Methodological proposal for diagnostic organizational pro innovation

The diagnosis is based on a consultation of the research base, which are the consumers and their perception regarding to the service provision and offering of the organization's products. These responses will be analyzed and considering an organization dedicated to the client, they will guide a decision process now from the top to the bottom, since the perception, apex of the process, will generate elements for the assessment of the functional strategies in view of innovation. Figure 5 shows the idea of diagnosis for the pro-innovation intervention and the Table 3 describes each element that composes this diagram.

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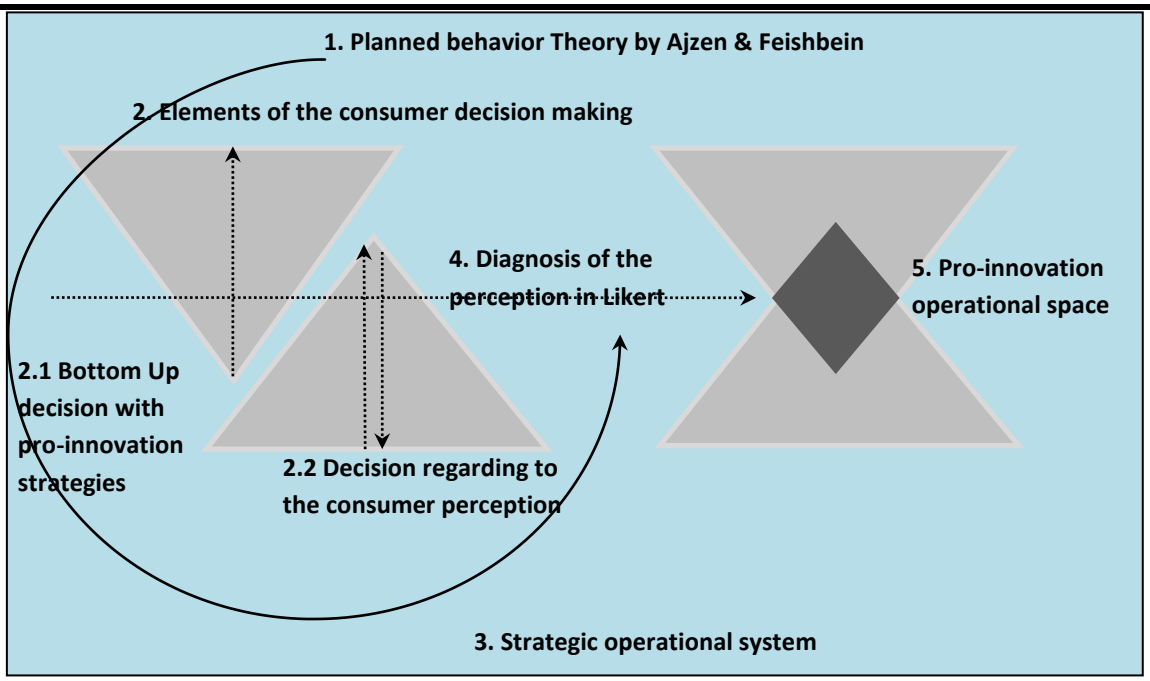

Fig.5: Diagram for diagnosis of intervention.

Source: Pedro Filho et al.(2013)

Table.3: Description of the intervention elements

Intervention elements	Description
1. Planned behavior Theory by Ajzem and Feishbein	1.1. This theory is circular role because it treats both employees as agents, as well as the consumer as protagonists.
2. Elements of the consumer decision making	2.1. In this space, the seven elements of the consumer decision making for research development are considered.
2.1. Bottom up decision involving pro-innovation strategies	2.1.1. The organization position itself with a focus on the customer, in this inversion, which brings the consumer perception as a guideline in the process of innovation proposed to the operating system.
2.2. Decision regarding to the consumer perception	2.2.1. It treats the consumer perception with the guiding basis to establish the innovation processes in the organization.
3. Strategic operational system	3.1 At this moment the elements of the consumer and the functional strategies of the company are considered concurrently.
4. Diagnosis of perception in Likert	4.1. Systematization of the planned responses with basis idea formers for orientation for decision making.
5. Pro innovation operational space	5.1. Organizational learning space where the formation of ideas and construction of ideas stimulators for implantation will occur.

Source: Prepared by the author

The diagnosis requires the identification of idealizers that promote the identification or the fomentation of the innovation in the organization, i.e., it is necessary to stimulate a keen eye of the business, process and service provided by the organization. The constructs considered for the questionnaire are the strategies of the operating system and the respective qualification of excellence expected for each functional activity, as demonstrated in our studies; as well as the elements of the consumer decision-making as credible and guiding steps for objective surveys. Figure 6and Table 4 show what was expected by the elaborator of the questionnaire, which aims to the intervention on the pro-innovation process.

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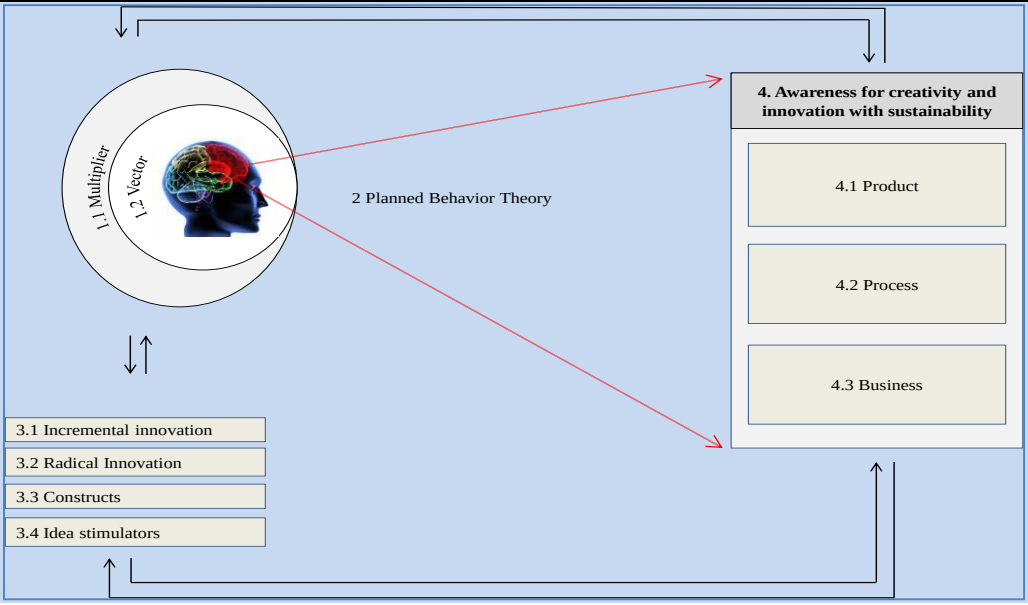

Fig.6: Diagram of the elements involved in the construction process of idea formers.

Source: Pedro Filho(2014).

Table.4: Description of the elements involved in the construction process of idea stimulators

Elements	Description
1 Agents	These are the actors involved in the sensitization and innovation processes responsible for process structuring and for the engagement of the stakeholders.
1.1 Multiplier	It is the operating agent that manages the process of awareness with the other actors involved. It's up to him to apply the dynamics in the procedure involving the other actors.
1.2 Vector	For this study, the vector is the agent that structure the process of raising awareness to the creative and innovation platforms; it is involved in the commitment with the required changes.
2 Planned Bevavior Theory	It brings the attitude as a central element of the individual in the process of performing actions, being a motivational focus able to engage and influence people.
3 Idea forming	These are primary elements on the ideals created by the friction of the creative individuals. It is derived from its reflection and depends on reflection, discussion, maturation and targeting.
3.1 Incremental Innovation	Improvements made in products, services and / or business without interfering in its essence or performing structural changes in their characteristics.
3.2 Radical Innovation	It is when there are structural changes in the product or in the allocation of the product, causing losses in its initial characteristics. It's a new or completely product redesigned by the process.
3.3 Constructs	These are mental constructions of the idea formation process to the maturity and consideration. They may be informal, which are the subject submitted to discussion and formal, which are considered adequate for testing
3.4 Idealizers	These are formal constructs tested, checked, verified and confirmed as sufficient. They are useful as applicable instruments in believable scenarios.
4 Sensitivity to creativity and innovation with sustainability	Act to educate the subject to the necessity for creativity and innovation in products, processes and / or business. In view of this study, it must adhere to sustainability.

Source: Pedro Filho (2014)

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well as the elements of the consumer decision making as credible and guiding stages of objective survey. To measure the responses, it will be used the Likert Scale, stablishing responses of satisfaction with 5 or 7 response options, defining the relation of the response and the respective evaluation of this response. This questionnaire will be applied to a test group of maximum 3 people, and it will be validated the intention of response with the proposed evaluation, as well as the necessary adjustments to the adequacy of the instrument and the idealizers test; followed by the application, tabulation and analysis.

In summary, these idealizers passed by the following steps: (a) develop questions based on the elements of the consumer and correlated to the business and their respective functional activity - constructs; (b) Establishment of a satisfaction scale and understanding of perception for evaluation - Likert Scale; (c) Questionnaire test with a validation group in order to set instrument - Idea stimulators; (d) Instrument application - Focus Group; (e) tabulation and analysis (response x assessment understanding).

These elements must be discussed within the organizational learning space, however, their treatment should consider the interrelationship of the operating system, the customer perception as a pro-innovation encourager, the tangible aspects of the organization, for example, products and services; and the intangible aspects such as employees relationship, organizational culture and reputation. The Theory of Planned Behavior is the central element in the process of performing these actions, therefore, taking the attitude as the central element, it will be a tool to work the motivational aspects of involvement necessary for the sake of the continued innovation. Figure 7shows the connections keys of this study to establish a diagnosis director to the organization's functional levels.

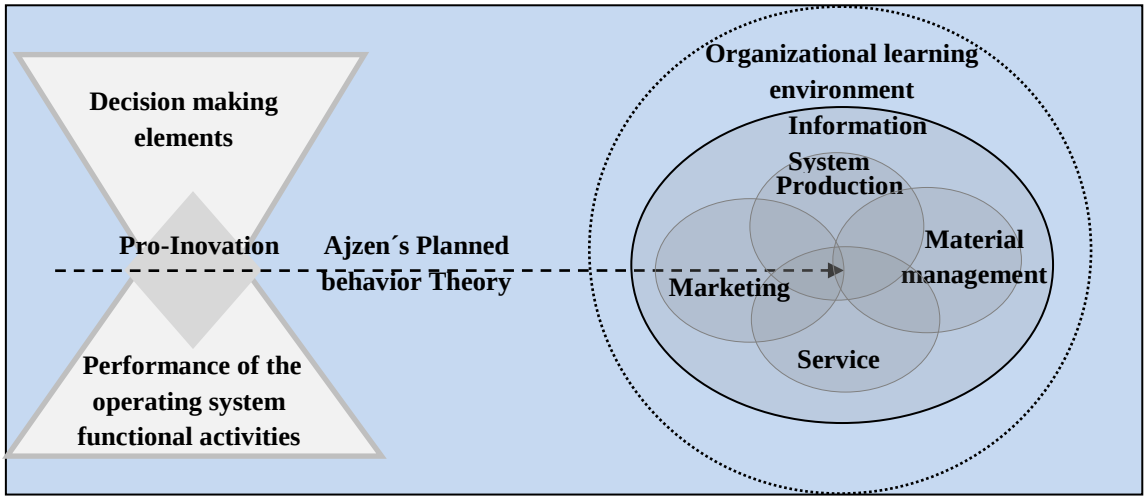

Fig.7: Application of pro-innovation diagnosis Methodology.

Source: Prepared by the author

VI. CONCLUSION

The process of continuous innovation obliges the organization to seek for excellence, however this process to be implemented successfully has to be part of the company culture. The atmosphere among the employees to generate ideas, discussion and adjustments of a team has to be propitiated by the leaders of the company, valued by the stakeholders and celebrated among the employees.

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